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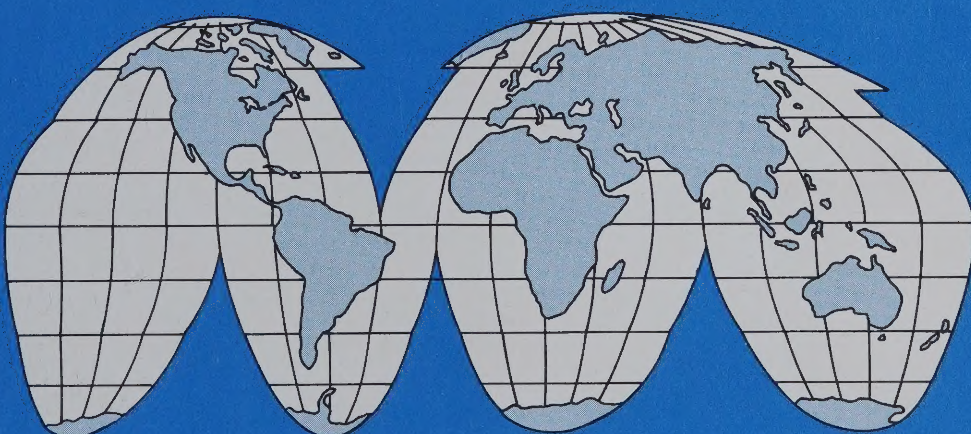
Annual Report 1971

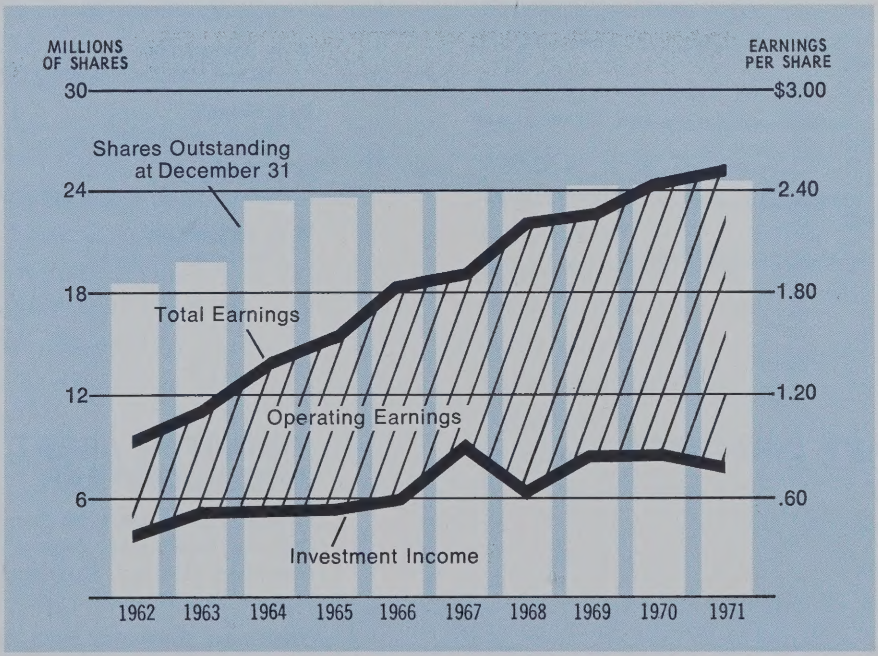


noranda

A billion dollar corporation: 92% owned by 31,000 Canadians

FINANCIAL SUMMARY

	1971	1970	1969	1968	1967	1966
			(in millions)			
Operating revenue	**$462**	$457	$428	$426	$373	$288
Dividends and interest earned	**22**	24	20	17	14	10
Depreciation and preproduction expenses	**24**	21	17	16	13	14
Taxes	**34**	37	37	34	35	30
Earnings	**61**	60	54	52	50	48
Working capital	**140**	132	76	134	108	98
Capital expenditures	**93**	95	70	58	47	41
Investments and advances	**190**	222	205	170	148	88
Long-term debt	**321**	224	178	224	85	9



ANNUAL MEETING April 28th, 1972, 2.45 p.m., Royal York Hotel, Toronto.

DIRECTORS

John R. Bradfield*,
Chairman, Noranda Mines, Toronto—Elected 1950

James C. Dudley,
Independent Financial Consultant, New York—Elected 1970

Hon. George B. Foster*,
Senior Partner—Foster, Leggat, Colby & Rioux, Montreal—Elected 1954

Louis Hébert,
President, Banque Canadienne Nationale, Montreal—Elected 1968

William James,
Partner—James, Buffam & Cooper, Toronto—Elected 1968

L. G. Lumbers*,
Chairman, Noranda Manufacturing Ltd., Toronto—Elected 1962

André Monast,
Partner—St. Laurent, Monast, Desmeules & Walters, Quebec—Elected 1966

R. V. Porritt*,
Vice-Chairman, Noranda Mines, Toronto—Elected 1958

Alfred Powis*,
President and Chief Executive Officer, Noranda Mines, Toronto—Elected 1964

W. S. Row*,
Executive Vice-President, Noranda Mines, Toronto—Elected 1960

J. D. Simpson,
Chairman, Placer Development Ltd., Vancouver—Elected 1962

W. P. Wilder*,
President, Wood Gundy Securities Ltd., Toronto—Elected 1966

* Member of the Executive Committee

OFFICERS

John R. Bradfield,
Chairman

R. V. Porritt,
Vice-Chairman

Alfred Powis,
President and Chief Executive Officer

W. S. Row,
Executive Vice-President

L. G. Lumbers,
Vice-President

J. N. Anderson,
Vice-President—Metallurgy

W. G. Brissenden,
Vice-President—Mines

E. K. Cork,
Vice-President—Treasurer

R. G. Driver,
Vice-President—Sales

J. A. Hall,
Vice-President—Mine Projects

R. P. Riggin,
Vice-President—Corporate Relations

D. E. G. Schmitt,
Vice-President—Mines

A. H. Zimmerman,
Vice-President—Comptroller

R. L. Pepall,
General Counsel

J. O. Hinds,
Executive Assistant to the President

R. C. Ashenhurst,
Secretary

HONORARY DIRECTORS

F. M. Connell

A. O. Dufresne

L. H. Timmins

J. R. Timmins (deceased)

TRANSFER AGENT AND REGISTRAR

Canada Permanent Trust Company,
Toronto, Vancouver, Calgary, Saskatoon, Winnipeg, Montreal, Saint John, N.B., Halifax, Charlottetown and St. John's, Nfld.

The Chase Manhattan Bank, New York, N.Y.

Contents

INDEX

An English or French edition of this Report may be obtained from the head office of the Company at 44 King Street West, Toronto.

On peut se procurer la version française ou anglaise de ce rapport en en faisant la demande au siège social de la compagnie, au 44 ouest, rue King, Toronto, Ontario.

DIRECTORS' REPORT

Earnings and Dividends

In what was a generally difficult year for mining, manufacturing and forest products, Noranda's earnings increased slightly to a record $61.5 million in 1971.

Earnings per share	1971	1970
From operations	$ 1.79	$ 1.58
From investments	.74	.88
Total	$ 2.53	$ 2.46
Extraordinary items	(.03)	(.05)
	$ 2.50	$ 2.41

Extraordinary items reflect the write-off of certain assets associated with operations being discontinued, offset in part by an exchange gain resulting from refunding of U.S. dollar borrowings by an associated company.

In comparing results of the two years, it should be remembered that 1970 earnings were considerably below potential due to strikes and government control of the price of copper in Canada. Moreover, earnings in 1971 were increased by 14¢ per share by the sale of a uranium prospect in the United States.

Throughout the year, operations were adversely affected by the continuing high value of the Canadian dollar, lower copper prices and, in the last four months, the U.S. surcharge. Nevertheless, earnings from mining and metallurgical operations were about the same as in 1970, when production was reduced by a strike at the Geco mine. Manufacturing earnings were affected by start up expenses at the aluminum reduction plant and by extremely depressed conditions in that industry, particularly in the fourth quarter. Sluggish economic conditions also affected manufacturing operations, but overall earnings were only moderately lower due to improved efficiency and a strong housing market. Pulp markets were soft but lumber markets were strong, and forest products operations increased their contribution to earnings compared with 1970, when results were affected by strikes. The increase in earnings from operations was partly offset by less investment income from associated companies.

A table on page 26 shows earnings from the main divisions of Noranda's business. Mining and metallurgical operations and investments accounted for 87% of earnings with manufacturing and forest products contributing 8% and 5% respectively.

Four quarterly dividends of 30¢ per share were paid during 1971, bringing the total payment for the year to $1.20 per share compared with $1.12½ in 1970.

Major Developments

The aluminum reduction plant at New Madrid, Missouri, reached commercial production in July after a smooth start-up, and by the fourth quarter was operating at rated capacity. As indicated in last year's Report, the capital cost was over 20% higher than the original budget of $85 million, but the performance of the plant has been satisfactory.

The two new sawmills of Northwood Mills in southern British Columbia began commercial production during the fourth quarter. Northwood Pulp started operating its new sawmill at Prince George in the spring and recently agreed to acquire Bulkley Valley Forest Industries, which operates a large sawmill backed by important timber resources west of Prince George.

During 1972, the wholly-owned Bell Copper project in British Columbia and the Mattabi Mines project in Ontario, 60% owned by Mattagami Lake, will begin production in the third quarter. In the second quarter, the Gibraltar Mines project, 71% owned by Placer Development, will begin production and the pulp and wood products complex of British Columbia Forest Products at Mackenzie, B.C., will be largely completed during the third quarter.

Work is well underway on a $133 million expansion of copper production facilities in Quebec. Mill capacity of Gaspé Copper is being tripled to 34,000 tons per day and a leaching plant to treat 5,000 tons of oxide ore per day is being built. This will double Gaspé's production of copper in concentrate to 70,000 tons per year. Gaspé will also increase its smelter capacity by 27,000 tons of copper per year and, to control sulphur emissions, will build a plant to produce 300,000 tons of sulphuric acid annually. At the Horne Mine, smelter capacity is being increased by 55,000 tons of copper per year through construction of a commercial sized Noranda Continuous Smelting Process reactor. At Montreal East, annual refining capacity is being increased by 72,000 tons of copper. Completion of this program, which has been somewhat enlarged from that described in last year's Report, is scheduled for the second quarter of 1973.

Financial

In December, 1971, a financial reorganization of Brunswick Mining and Smelting was approved by that company's shareholders, which involved exchanging of Noranda's $50 million of convertible securities into 16.7 million common shares and the underwriting by Noranda of a rights offering of 8 million common shares at $2.50 per share. Noranda acquired 5.3 million common shares pursuant to the rights offering and now owns a total of 22 million Brunswick shares, 64% of the total outstanding, at a cost of $65 million. As a result, Brunswick's 1971 year-end balance sheet is consolidated with that of Noranda and operating results from 1972 onwards will also be consolidated. The effect of this on Noranda's balance sheet is described in Note 1(b) on page 24.

Capital expenditures and major investments during 1971 totalled $125 million, in addition to which long-term debt of $14 million was repaid. Retained cash flow from operations totalled $59 million and term bank financing amounting to $80 million was arranged. Apart from the Brunswick transaction, the net result would have been to increase net working capital by $21 million.

Outlook

Noranda's earnings in 1972 will suffer to some extent as a result of the Brunswick transaction, but substantially improved operations are projected for that company over the longer term. At all operations, costs continue to rise inexorably, and in 1972 Noranda will absorb substantially higher net exploration and interest expenses. The new projects described earlier will not make a significant contribution to 1972 earnings. In the face of these factors and in the absence of improved demand and prices for Noranda's products, 1972 would be a year of pause in the past record of annual increases in earnings. However, improvement could result from the buoyant economic conditions generally forecast for 1972.

Although Canada's new taxation system has been enacted, there is confusion about the details of its application and the mining industry still faces considerable uncertainty in this area. In addition, other proposed new federal government legislation and policies pose potentially serious problems for the entire Canadian business sector. On the positive side, however, Noranda's ability to benefit from the growing demand expected during the 1970's for basic materials is being considerably enhanced by the various projects now underway, and the longer range future continues to be promising.

The 50th anniversary of Noranda's incorporation will occur May 1, 1972.

On behalf of the Board,

President.

Toronto, February 10, 1972.

Mr. Powis in conference with Messrs. Zimmerman (left) and Brissenden (right).

METAL MARKETS

The decline in demand for most metals which commenced in the second half of 1970 continued through 1971. The general lack of business confidence and lower rates of capital expenditure were reflected in a worldwide pause in metals consumption growth which is expected to resume in 1972.

Copper

The developing surplus in copper supplies was partially offset in the first half by insurance purchasing in the U.S. and elsewhere prior to expiration at mid-year of labour contracts at major U.S. mines and metallurgical plants. Although the strikes caused a loss of some 250,000 tons, refined stocks were adequate both inside and outside the U.S.A.

World refined consumption was marginally lower. However, this was tempered by a reduction of 4.5% in refined production due to the strikes in the U.S., lower output in Zambia due to the Mufulira mine disaster, work stoppages in Peru and major difficulties in Chile.

The London Metal Exchange price rose from 47¢ U.S. in January to 58¢ in April and ended the year at 47½¢. U.S. producers' prices began the year at 50⅜¢, increased to 52¾¢ in March and declined to 50¼¢ in late November. Noranda's domestic price increased 2¢ in March to 53¢, and in June was adjusted to 53¾¢ to reflect the then weaker Canadian dollar. In November, it was cut to 50⅜¢ following the drop in the U.S. price.

Zinc

World consumption increased 3% but was below the 1969 record level. Metal production remained in balance through adjustments in smelter output. Four U.S. zinc smelters and two in the U.K. were closed for a loss of 350,000 tons in annual capacity. U.S. producers' metal stocks declined by over 50% and metal imports, particularly from Canada, increased 13% as demand was heavy prior to the steel industry labour negotiations. Later the U.S. Phase I price freeze and surcharge limited imports.

In the U.S. and Canada, prices increased ½¢ in each of March and May and 1¢ in July to 17¢ per pound. The overseas price rose from the equivalent of 14¢ to 16.3¢ U.S. in June and became the equivalent of 17.4¢ U.S. with the devaluation of the U.S. dollar in December.

Lead

Consumption rose marginally with improved motor car battery demand. Production was steady and producers' stocks declined 20% to 240,000 tons.

In Canada, the price remained unchanged at 13½¢ C.F. per pound. The U.S. price was raised ½¢ in June to 14¢ and in December was changed to a delivered basis: a 1/5¢ increase to Western consumers. The London Metal Exchange price declined in the second half to a four year low, equivalent to 9.6¢ U.S. per pound in November.

Lead additives for gasoline which account for 10% of consumption continue to be threatened by anti-pollution measures. However, emission control systems for leaded fuels have been developed and are now being tested.

Molybdenum

Lower steel production, particularly specialty and tool steels, coupled with inventory reductions caused demand to drop by 15% to 118 million pounds. Byproduct productions continued to increase and stocks rose to 100 million pounds despite some mine closures and reductions by most primary producers. Some improvement is expected in 1972 but surplus supplies and capacity will probably remain for several years.

Product prices have declined but the published price for concentrate remains at $1.72 U.S. per pound of contained molybdenum.

Aluminum

Competition was intense in the aluminum industry, despite cutbacks by the major producers to offset new production facilities. Product shipments in the U.S. were up 6%, but down over 8% for ingot, where price discounting was severe. Excess capacity could continue the price pressure in spite of greater activity in construction and transportation.

Silver

Prices reflected the general business slowdown and drifted from $1.72 per ounce in January to $1.50 in August. Imposition of the restrictive U.S. measures further undermined confidence and by early November the price had declined to $1.29 from where it recovered to $1.38 by the year end. However, a substantial quantity of surplus stocks were absorbed by the market in 1971.

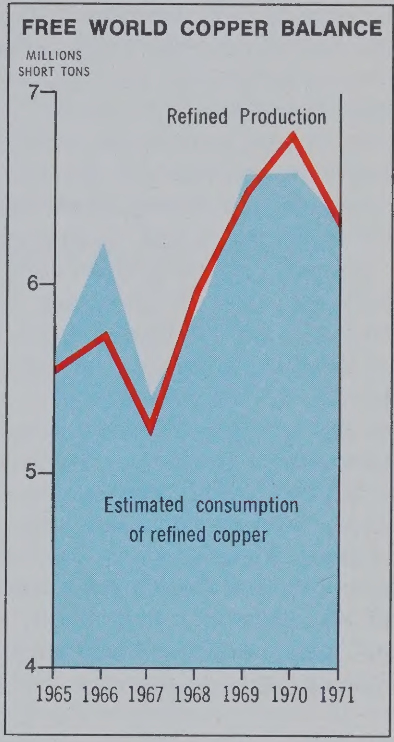
Gold

Continuing weakness of the U.S. dollar and speculation on the role of gold in the realignment of currencies moved the Free Market price from $37.40 per ounce in January to $43.94 in August. Following the U.S. revaluation of gold to $38 per ounce, prices settled only to $42.40 and by the year end had risen again to $43.62 per ounce. The role of gold as an international monetary metal has been confirmed and industrial demand continues to grow.

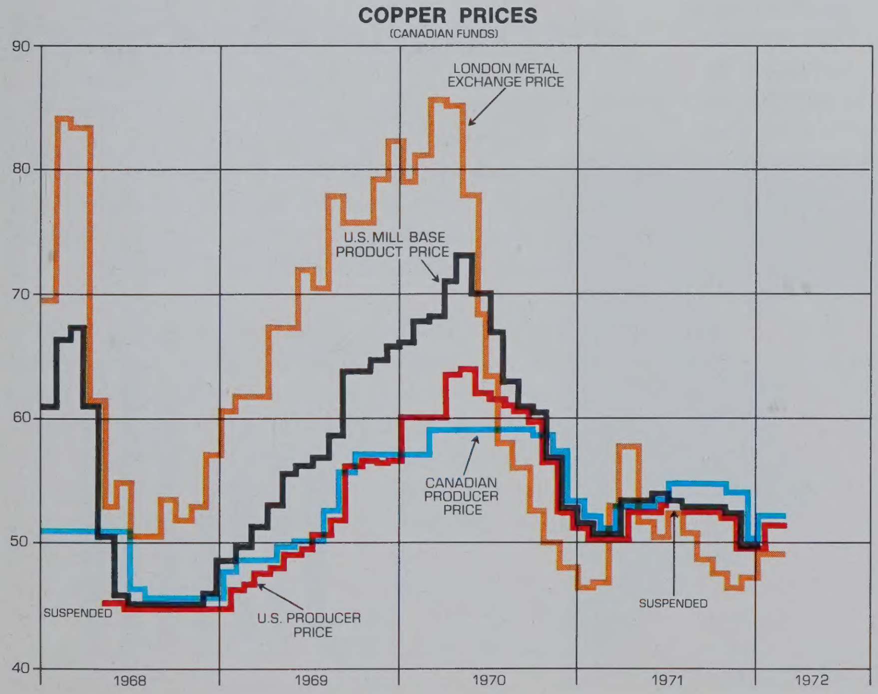
NORANDA SALES CORPORATION

Despite the general decline in metal prices, sales from the main office in Toronto and the subsidiary in London, England, totalled some $500 million in 1971.

During the year, a 50% interest was purchased in Rudolf Wolff & Co. Limited, a founding member of the London Metal Exchange, with subsidiary companies in Dusseldorf and New York. This step has provided Noranda with trading facilities on the LME, a wider range of services for its non-ferrous metal customers overseas, and a broader information base on metal markets.



Refined production statistics by the World Bureau of Metal Statistics, London. Estimated consumption takes into account changes in producer stocks, LME/Comex stocks which increased over 100,000 tons in 1970-71 and reduction of the U.S. national stockpile of over 700,000 tons in 1965-67.



EXPLORATION

Some $9.7 million was spent on mineral exploration during 1971 compared to $8.7 million in 1970. The Canadian programme accounted for 45% of these expenditures, Australia 28%, U.S.A. 13%, and other countries 14%.

In Canada, work has continued from coast to coast through eight offices and several interesting prospects are being investigated, particularly in British Columbia and Newfoundland.

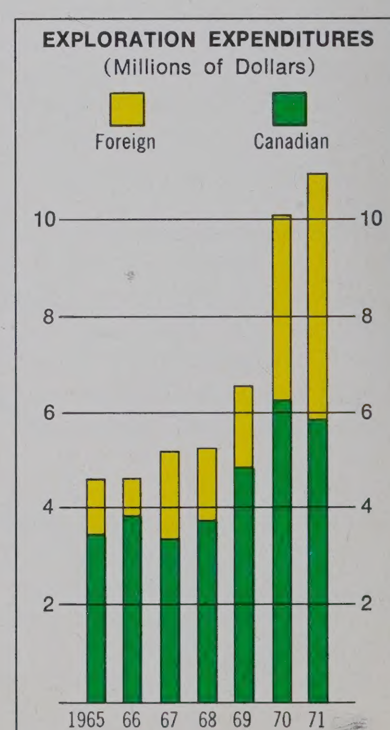
Beyond the extensive work in the U.S.A. and Australia, new programmes were undertaken in Greece, Sardinia, Portugal, South Africa and Brazil. Exploration continues in Mexico; Great Britain, Ireland, Spain and Argentina but has been abandoned in the Philippines and the Dominican Republic.

In New Mexico, the Bokum uranium property, in which Noranda held an interest along with Kerr Addison Mines through the Fernandez Joint Venture, was sold and Noranda realized $5,598,000 U.S. for its share in the property. Development work has continued on the original Fernandez Joint Venture uranium property and as well on the Jim Jim uranium property in the Northern Territories of Australia. However, these properties will not be brought into production until satisfactory uranium sales contracts have been negotiated.

Noranda suffered a great loss in the untimely death of Mr. Edward Futterer, Vice-President — Exploration, on September 20. Mr. Futterer had been in charge of exploration since 1969 and it was mainly through his efforts that the programme had expanded.

Noranda and Gaspé Copper share equally a 20% interest in **Northern Oil Explorers Ltd.** and at the year end had contributed $6,300,000 toward exploration. As in 1971, their portion of the 1972 budget is expected to be $1.5 million. Two small hydrocarbon discoveries at Louise Creek and Balzac will produce in 1972. Lands held by N.O.E.L. total some 9,202,400 gross or 6,247,600 net acres.

During four years through 1971 Noranda has subscribed $2.32 million in sustaining its 4.5% interest in **Panarctic Oils Ltd.** Calls for a further $1 million are expected in 1972. A five-year $175 million plan of operations is under way. This was made possible, without increasing calls on participants, through several major farmouts and an agreement with large gas companies under which they put up $75 million for drilling. To date, three gas discoveries have been made on Melville, King Christian and Ellef Ringnes Islands. No. 6 well, two miles from the first well on King Christian Island, under test flowed at 165 million cubic feet per day. At year end 28 wells had been drilled or were drilling. There are nine drilling rigs in the Arctic Islands and early in 1972 all will be operating on Panarctic land.



RESEARCH

The development of the process for the continuous casting of strip was completed and Noranda Metal Industries is now building a prototype plant at Fergus, Ontario. This development bypasses the conventional slab-casting followed by rolling to strip and sheet.

The heat transfer lab, created to assist with forge fin tubing, has developed the required design data and correlations and has tested various designs of heat exchangers submitted by the marketing group of N.M.I.

Research on the reduction of sulphur dioxide in smelter gases has progressed to the stage of a small pilot plant.

Collaboration with Canadian Electrolytic Zinc Ltd. resulted in a substantial improvement in current efficiency at the reduction plant.

During the year a process for direct plating of copper on aluminum was successfully developed. The commercial viability of the process shows considerable potential and steps have been taken for patent protection.

Expenditures incurred in 1971 at the Noranda Research Centre in Pointe Claire, Quebec amounted to $1.8 million.

ENVIRONMENTAL CONTROL

In effecting maximum economic utilization of resources, compatible with the principles of conservation, the monitoring of effluents and emissions has been broadened at a number of locations. Advanced technology in water treatment, after trial on a test basis, has been successfully implemented at one operation.

Reductions in gaseous emissions have been effected by some process changes. Expansion plans for smelters include provisions for further lowering the levels of particulate matter and sulphur dioxide in emissions. The rehabilitation of tailings storage areas with vegetation cover continued in all locations with varying degrees of success.

Capital costs of control improvements during 1971 were $1.6 million which will be increased more than tenfold with major planned expansions scheduled in 1972.

MINING AND METALLURGICAL
Consolidated Companies

HORNE MINE

The mine produced 728,600 tons of ore averaging 2.21% copper and 0.167 oz. of gold per ton. Fluxing ores produced were 118,000 tons from Joliet and 317,000 tons from the Don Rouyn pit.

Ore reserves at December 31, 1971 were:

	Tons	Copper %	Gold Oz/Ton
Sulphide Ore	1,342,000	2.11	0.175
Joliet Fluxing Ore	149,000	1.0	—

The concentrator treated 683,000 tons of sulphide ore from which were recovered 98,900 tons of copper concentrates for smelting and 162,000 tons of pyrite concentrates for sale to chemical plants. As ore reserves will be exhausted late in 1973, termination arrangements for the underground and other affected employees were included in the 3-year collective bargaining agreement dated Oct. 15, 1971. Practically no underground development is now being done.

Smelter

Increased receipts of custom concentrates resulted in a record smelter production of 233,000 tons of anode copper. Two natural gas pre-heaters for combustion air for the reverberatory furnaces were put in service early in the year. Installation of additional dust collecting facilities at a cost of $6,000,000 is underway. The Noranda Continuous Smelting Process developed at the Noranda Research Centre in 1964 has been thoroughly tested in a 100-ton per day pilot plant at the Noranda Smelter during the past four years. As a result of this exhaustive work, a large scale reactor to treat 800 tons of copper concentrate per day and costing $13 million is under construction and will be in operation early in 1973.

A new environmental control laboratory was placed in operation.

	Material Smelted		Copper Content of
	Noranda (tons)	Custom (tons)	Anodes Produced (tons)
1971	724,100	825,500	233,040
1970	769,000	776,800	210,900
1969	811,200	776,500	220,860
1968	822,900	790,900	221,600
1967	793,800	800,100	212,300

GASPÉ COPPER MINES

Needle Mountain

The mine produced 2,508,000 tons of ore averaging 1.04% copper, including 1,230,000 tons from the open pit. Ore reserves decreased by 1.9 million tons to 25.2 million tons averaging 1.35% copper.

The concentrator treated 2,406,000 tons of ore and produced 81,700 tons of concentrate containing 23,250 tons of copper and concentrates containing 225,000 pounds of molybdenum.

Copper Mountain

The open pit produced 1,574,000 tons of ore averaging 0.71% copper while 6,781,000 tons of waste, low grade ore and oxide ore were removed. Sulphide ore reserves decreased by the tonnage mined to 228 million tons averaging 0.40% copper while oxide ore reserves remained at 34 million tons averaging 0.45% copper.

The concentrator treated 1,575,000 tons of ore and produced 35,900 tons of concentrate containing 9,650 tons of copper and concentrate containing 182,000 pounds of molybdenum.

Smelter	Material Smelted		Copper Content
	Gaspé (tons)	Custom (tons)	Anodes Produced (tons)
1971	221,800	156,000	73,800
1970	227,500	141,500	69,900
1969 (strike)	185,000	84,000	49,400
1968	228,600	107,000	61,100
1967	200,800	97,800	54,500

Expansion

Construction commenced in June to expand mine, mill and smelter facilities at a cost of $108,000,000. Mill capacity to treat sulphide ores will be increased to 34,000 tons per day, a leaching plant to treat 5,000 tons per day of oxide ore will be built, smelter capacity will be increased by 27,000 tons of copper per year and a 300,000 ton per year acid plant is under construction.

At year end $35,000,000 had been spent or committed. The whole project will be completed in mid-1973.

A formal assessment for federal taxes on earnings from the Copper Mountain Mine is yet to be received. Should it deny Gaspé's application for the three year exemption period for bringing a new mine into production, the assessment will be appealed.

GECO MINE

Tonnages of ore mined and milled for all metals produced reached record levels. Some 1,760,000 tons averaging 2.27% copper, 5.52% zinc and 2.03 oz. of silver per ton were treated to produce concentrates which contained 37,700 tons of copper, 79,200 tons of zinc, 1,400 tons of lead and 2,593,600 ounces of silver.

The year-end estimate of ore reserves indicated a net increase of 300,000 tons to 29.5 million tons with slight reduction of grades to averages of 1.97% copper, 4.37% zinc and 1.82 oz. of silver per ton.

No major capital additions were undertaken but further improvements to environmental control were implemented. A system to recycle tailings water back to the mill for process purposes is planned.

CANADIAN COPPER REFINERS

Refined copper production was slightly less than in 1970. Increased copper production at the Noranda smelter was offset by a decrease in shipments from Hudson Bay Mining and Smelting Company due to a five month strike.

The extension to the silver refinery, which includes a process change to improve environmental control, was completed at the year-end.

The planned copper production at the Noranda and Gaspé smelters will call for greater refining capacity. This will be provided without adding to electrolytic tanks by a new procedure utilizing periodic reverse current.

	Refined Metal Production		
	Copper (tons)	Silver (ounces)	Gold (ounces)
1971	342,000	12,885,000	405,000
1970	349,000	12,447,000	424,000
1969	327,000	12,360,000	389,000
1968	351,000	13,084,000	435,000
1967	324,000	11,276,000	475,000

BRENDA MINES

Open pit mining comprised 5.5 million tons of waste stripping, 3.3 million tons of low grade ore stockpiled for future treatment and 9 million tons of ore averaging 0.21% copper and 0.06% molybdenum which was delivered to the concentrator.

The milling rate averaged 24,600 tons per day. Metal recoveries were 89.8% for copper in 80,700 tons of concentrate and 86.1% for molybdenum in 8,600 tons of concentrate. The copper concentrate was shipped under contract to Japan until November when, following notice requiring a 20% reduction in the rate of shipments, alternative smelting arrangements were made for the excess tonnage resulting. Owing to the weak molybdenum market, only 53% of the production of molybdenum concentrate was sold and at year-end there were unsold stocks of concentrate containing 7.6 million pounds of metal.

Based on conservative valuation of the unsold 1971 molybdenum production, and after providing $4.1 million interest charges and $9.3 million write-offs, there was a net loss of $337,600 before extraordinary income. Including a gain of $1.4 million arising from conversion of a $U.S. 21 million loan to Canadian funds, net earnings for the year were $1,087,000. At year-end the outstanding debt was $58.5 million, including $2 million under the revolving working capital loan.

BRYNNOR MINES

Production at the Boss Mountain mine was suspended December 3, 1971 due to high inventory of concentrate and mine operating losses. Lower grade of ore, due to dilution, high labor costs and the high value of the Canadian dollar adversely affected results.

The mine produced 534,500 tons of ore averaging 0.203% molybdenum and concentrate containing 2,010,000 lbs. of molybdenum with a recovery of 92.7%.

The ore picture remains favorable with reserves estimated to be 2.7 million tons averaging 0.25% molybdenum.

Limited underground work will continue until June 1972. Mine and mill equipment will be maintained until improved economic conditions justify the resumption of operations.

Removal of equipment from the Kennedy Lake property on Vancouver Island was completed.

BRUNSWICK MINING AND SMELTING

The balance sheet of this Company was consolidated with Noranda as at December 31, 1971, pursuant to the transaction described in note 1(b) to the financial statements. The operating results for 1971 are shown in the table on page 27.

Both mills treated a combined average daily tonnage of 9,380 per day worked compared to 7,970 in 1970 when there was a 41-day strike. Gases from burning sulphides in an old stope caused the loss of 31 days of production at No. 12 Mine. No. 6 mill was shut down for 3½ months to reduce stocks of combined zinc-lead concentrate. The grade of ore mined at No. 12 improved from 10.47% zinc plus lead in 1970 to 11.36% in 1971. Metal recoveries for zinc and lead also improved.

Zinc-lead ore reserves at both mines were reduced by the tonnages mined and a recalculation of reserves at No. 6 reduced these by an additional 1,000,000 tons.

Zinc-Lead	Tons	Zinc %	Lead %	Silver oz.	Copper %
No. 12 Mine					
Proven	31,142,000	8.74	3.51	2.41	0.26
Probable	37,003,000	8.61	3.50	2.65	0.30
No. 6 Mine					
Proven	5,937,000	6.01	2.20	2.02	0.39
Copper					
No. 12 Mine					
Proven	9,474,000	1.13	0.40	0.85	1.11

The **Smelter Division,** formerly East Coast Smelting and Chemical, again showed improved operating results as follows:

Production	1971	1970	1969	
Net ISF metal	74,230	67,680	60,800	tons
SHG Zinc *	44,770	36,610	32,300	"
CG Lead	22,420	20,070	16,800	"
Sulphuric Acid	119,000	77,080	103,000	"
Copper Dross	4,710	3,480	2,275	"
Cadmium-Zinc Alloy	—	127	95	"
Silver	1,142,300	1,072,200	318,000	oz.
Bismuth	26,600	7,960	—	lbs.
Cadmium (refined)	37,360	—	—	"

* includes ISF zinc sold

Prices received for zinc and lead metals averaged 15.4¢ and 12.7¢ per lb.

Markets for lead concentrates surplus to smelter requirements disappeared during the second half of 1971. Accordingly, it was decided to convert the zinc-lead smelter to a lead smelter over an 18-month period and at an estimated cost of $10,000,000. When completed, all of Brunswick's lead concentrates will be treated at its own smelter.

Bell Copper Mines, plant site, Babine Lake, British Columbia, during construction in September, 1971.

BELL COPPER

Open pit stripping by contractor totalled 5.1 million cubic yards of overburden and rock. Production equipment is being assembled and mine personnel will move an additional 800,000 tons of waste rock to the tailings dam.

The crusher and concentrator buildings are complete. Four high voltage submarine power cables laid across the lake provide electricity. Tune-up of this 10,000 ton per day operation is scheduled for mid-1972. A subdivision is being added to the neighbouring Granisle townsite. The total project is estimated to cost $44.5 million.

LANGMUIR

Underground development work has been slow due to water. The surface plant will be completed during the summer of 1972 but production will not be achieved until March, 1973. With the delay, this 700 ton per day nickel project is estimated to cost $11 million.

Unconsolidated Subsidiaries

CENTRAL CANADA POTASH

The operation made a fair contribution to Noranda's earnings in 1971.

Routine room and pillar mining was established and 25 miles of linear advance was made in main and panel entries and in rooms for a total of 49 miles since mining began in 1969.

Some 2,445,000 tons of ore averaging 27.9% K_2O equivalent were treated in the mill to produce 880,100 tons of muriate of potash. Shipments, although lower than anticipated during the first half of the year due to a railway strike and shortage of rail cars, were increased as compared with 1970. There were 95,400 tons of muriate in the product storage inventory at year-end.

To meet increasing demand for coarse and granular grades of product, a 9th compactor was installed thereby increasing the combined production of the two premium grades.

Prices in the first half reflected a return to seasonal increases for the heavy demand periods based on the guidelines of the Saskatchewan government's prorationing program. Those prices were eroded by industry pressures during the second half and recovery was restrained by the U.S. price freeze through to mid-November. Seasonal increases have since been re-established to commence in January 1972.

AUNOR GOLD MINES

Gold production was 76,900 ounces, from 276,850 tons of ore averaging 0.29 oz. of gold per ton, as compared with 73,900 ounces in 1970. Additional underground mechanization and completion of a new backfill facility contributed to increased capacity and cost control. Ore reserves were maintained at 835,000 tons averaging 0.31 oz. of gold per ton including allowance for dilution. Extensive rehabilitation work on the leased tailings area was carried out according to plan.

HALLNOR MINES

After 33 years of profitable production, regular operation of the mine was terminated on April 30 because the remaining ore reserves could not be extracted economically. The mine, plant, equipment and stores were sold to Pamour Porcupine Mines Limited effective May 1. Hallnor retained the townsite and surface rights.

EMPRESA MINERA DE EL SETENTRION

The Nicaraguan gold mine produced and treated 119,000 tons of ore with average grade of 0.69 oz. gold per ton, a slight improvement over 1970.

In the Panteon section of the mine, the 900-foot drainage level was completed and good progress made in overcoming hot water problems and establishing adequate ventilation on the levels above. Proven ore reserves at year-end were slightly higher at 218,000 tons averaging 0.57 oz. gold per ton. There is little promise of additional ore except for some 300,000 tons indicated in the Panteon vein.

Setentrion declared dividends of $1,400,000, of which Noranda receives $854,000. See table on Page 27.

EMPRESA FLUORSPAR

Strong demand and firm prices for fluorspar prevailed during 1971 and the Mexican operating company, Minera Las Cuevas, produced 355,000 tons of ore and shipped 356,000 tons, slightly more than in 1970. Mine operations were normal and ore reserves increased slightly to 3,045,000 tons.

Las Cuevas paid a dividend of $1,288,000 of which Empresa received $631,000. In addition, an instalment payment of $625,000 was received from the Mexican buyers of the 51% equity in Las Cuevas, reducing their outstanding debt to Empresa to $1,434,000. Empresa declared dividends totalling $1,819,000 of which Noranda received $1,364,000. See table Page 27.

CHILE CANADIAN MINES

Ore treated in 1971 amounted to 202,000 tons, including 70,000 tons of custom ore, and cement copper produced contained 2,050 tons of copper. By mid-year, the operation had become unprofitable due to declining copper prices and, export of copper cement having been prohibited, to high treatment charges and discriminatory exchange terms imposed by domestic smelters.

During a delay required to validate withdrawal of 1970 profits from Chile, efforts were made to sell the mine and plant but were unsuccessful. Preparations to suspend production were well advanced when the Chilean government arbitrarily took over the property and barred company officials from entry. In final result, Setentrion and Noranda recovered $4.1 million of their $4.5 million investment made in 1964.

Associated Companies

KERR ADDISON MINES

After realizing a profit of $3,541,000 on the sale of the Company's interest in the Bokum-Keradamex Joint Venture and providing for a loss of $1,744,000 on abandonment of the Adanac project, earnings for 1971 declined to $6,094,000 or 64¢ per share as compared to 75¢ per share in 1970. Earnings from mining operations were reduced significantly due to lower copper prices, increased costs, the strong Canadian dollar and the closing of the Quemont mine during the fourth quarter when ore was exhausted. See page 27.

After paying dividends totalling 45¢ per share the net value of current assets and investments at quoted market values, including investment in shares and debentures in Agnew Lake Mines Limited of $12.1 million, increased to $10.13 per share from $9.50 a year earlier.

The Kerr Addison mine produced 943 tons per day compared to 935 in 1970. Ounces of gold produced increased slightly from 137,100 to 138,800.

The Normetal mine, wholly-owned, the Joutel mine, 63% owned and the Icon Sullivan Joint Venture mine, 21% owned, all operated at capacity treating 919, 655, and 607 tons per day respectively.

After a feasibility study on the Black Hawk copper-zinc property near Blue Hill, Maine, U.S.A., it was decided to undertake production at a rate of 1,000 tons per day. Estimated diluted proven and probable reserves are 565,000 tons grading 16.8% zinc and 0.62% copper and 245,000 tons grading 2.0% copper. In addition there are 650,000 possible tons of high-grade zinc ore and 900,000 possible tons of copper ore and chance for additional reserves are considered excellent. After financing the property into production, the Company will have a 60% interest. Production is scheduled for late 1972.

The 13% interest in the Bokum-Keradamex Joint Venture in New Mexico was sold. The 26% interest was retained in the Fernandez Joint Venture in the same general area, which indicated reserves in two deposits totalling 40 million pounds U_3O_8 at depths of 2,700 to 3,000 feet. An engineering evaluation was initiated including a programme to obtain rock and hydrological characteristics in each of the two deposits.

PAMOUR PORCUPINE MINES

A dividend of $250,000 was paid, of which Noranda received $115,500. See page 27.

With termination of the neighbouring Hallnor operations in April, the mine, plant and equipment were purchased by Pamour and became the Pamour #2 Plant for use, prior to disposal, in salvaging remnants of ore for treatment in the Pamour mill. Some 637,600 tons of ore were produced from #1 Mine and 52,900 tons from #2 Mine for a combined average mill head of 0.138 oz. of gold per ton and recovery of 85,140 ounces of gold.

Early in the year ore from a new stope in the lava formation of #1 Mine created an unexpected and serious recovery problem in the mill. This was identified with difficulty and resolved late in the year by installing agitators from #2 Plant in the #1 Mill. Recovery of gold averaged 89.1% as compared with 94.6% in 1970 and was 94.0% during December. Tailings containing some 3,000 ounces of recoverable gold were impounded for retreatment in 1972.

Combined ore reserves at year-end were slightly increased to 1,558,000 tons averaging 0.13 oz. gold per ton.

ORCHAN MINES

Dividends of $2,423,000 were paid, of which Noranda received $1,087,000 about the same as in 1970. See page 27.

Ore milled from the Orchan mine totalled 409,500 tons averaging 10.7% zinc and 0.9% copper. The custom milling circuit was not in use during the year. Ore reserves in the Orchan mine were depleted by 238,000 tons to 2,263,000 tons averaging 9.3% zinc and 1.1% copper.

At Garon Lake, development of a small orebody through a ramp was continued for production after September 1972. The ore will be trucked 11 miles for treatment in the Orchan mill.

Other Important Interests

MATTAGAMI LAKE MINES

Net earnings of $5,737,000 or $0.87 per share compare with $7,910,000 in 1970 and $9,095,000 in 1969. Dividends of $1.20 per share were paid as compared to $1.50 per share in each of the last three years. Noranda received $2,490,000 in 1971 as compared to $3,112,000 in 1970.

Mattabi Mines, owned 60% by Mattagami, has ore reserves of 12,866,000 tons averaging 7.60% zinc, 0.91% copper, 0.84% lead and 3.13 oz. silver per ton. Of this, some 8 million tons will be mined by open pit. Production at 3,000 tons per day is scheduled for mid-1972, at a capital cost of some $40 million.

Some four miles east of Mattabi and immediately north of a common boundary with Sturgeon Lake Mines, 826,000 tons of ore averaging 9.19% zinc, 1.22% copper, 1.33% lead, 0.015 oz. gold per ton and 5.24 oz. silver per ton, have been outlined on Mattagami ground. The mining of this ore, along with ore in ground owned by Sturgeon Lake Mines, is under discussion.

Approximately 4,000 feet northwest of the above deposit, 25 diamond drill holes have indicated an ore body with a strike length of 700 feet on Mattagami ground. Further drilling along strike and at depth is required to delimit this deposit.

Canadian Electrolytic Zinc at Valleyfield, Quebec, is owned by Mattagami Lake, Orchan, Kerr Addison and Noranda, whose interests are 62.5%, 18.7%, 9.7% and 9.0% respectively. It is managed by Noranda. Zinc production in 1971 was 119,600 tons as compared with 124,100 tons in 1970. By-product shipments of cadmium were lower than in 1970.

St. Lawrence Fertilizers, managed by C.E.Z., operated at about the same level as in 1970.

In April, 1971 **General Smelting** and Federated Metals of Canada formed a new company, Federated-Genco, in which General Smelting has a 40% interest. The new company has scrap metal reclamation plants at Scarborough, Lachine and Burlington and should benefit from the increased variety of products and broader base.

PLACER DEVELOPMENT

Placer's 1971 earnings were $4.1 million or 68¢ per share compared with $7,201,000 or $1.20 per share in 1970. Results during 1971 were adversely affected by poor markets for molybdenum and lower copper prices. Two quarterly dividends of 30¢ per share were paid during the first half, following which the rate was reduced to 15¢.

In response to market conditions, production of molybdenum at the Endako mine was cut by 25% during the latter part of the year and a further 25% curtailment will take effect in March, 1972.

The 40% owned Marcopper operation in the Philippines began production in the fourth quarter of 1969, development having been financed by $45 million in borrowings. By the end of 1971, these borrowings had been repaid in full from cash flow.

Gibraltar Mines will begin treatment of 30,000 tons of low-grade copper-molybdenum ore per day near Williams Lake, B.C. during the second quarter. Capital cost will be within the $74 million budget, and Placer's interest in the operation will be 71%.

Effective this year, Placer will restate its earnings to reflect its equity in the profits of Craigmont, Marcopper and Mattagami Lake. Had this been done in 1971, earnings would have been approximately $1.15 per share.

CRAIGMONT MINES

While copper production was 15% higher, the prices realized were 24% lower and net profits for the year ended October 31, 1971 were $2,924,000 compared to $5,289,000 in the preceding year.

Craigmont paid dividends totalling $5,077,000 of which Noranda received $1,000,000. Working capital was reduced $1,300,000 to $8,770,000.

NORCOMP

Norcomp was established in 1970 to meet the information systems and data processing needs of the Noranda group of companies. During the year conversion of some 500 programmes was accomplished.

New equipment was installed in October, 1971, in the division's Don Mill's site and at the year-end central computer processing was being used by seven operations in Ontario, Quebec and Saskatchewan.

MANUFACTURING
Consolidated Companies

CANADA WIRE & CABLE

Sales and earnings of Canada Wire & Cable improved during 1971 despite unsettled conditions for the company's products in world markets. Performance benefited from the reorganization and capital expenditure programmes undertaken in recent years. The company continues to modernize its facilities and to expand its research and development activities.

Sales and earnings of the company's foreign affiliates continued to grow, although at a slower pace than in 1970.

NORANDA METAL INDUSTRIES

Demand for copper and brass mill products improved slightly due to the modest recovery in the North American automotive and construction sectors. Shipments from Canadian and U.S. plants were 7% ahead of last year but well below the record level of 1969. Earnings were lower, however, due to severe competition resulting in lower selling prices.

Research activities provided a number of important developments. Two of these, a free machining zinc aluminum alloy and a continuous casting process for copper alloy strip, should have a significant impact on future profitability. A pilot plant for the continuous casting process is planned for installation during 1972 at the Fergus, Ontario, plant.

NORANDEX

Operations at Norandex (formerly Pacific Coast) improved substantially over 1970.

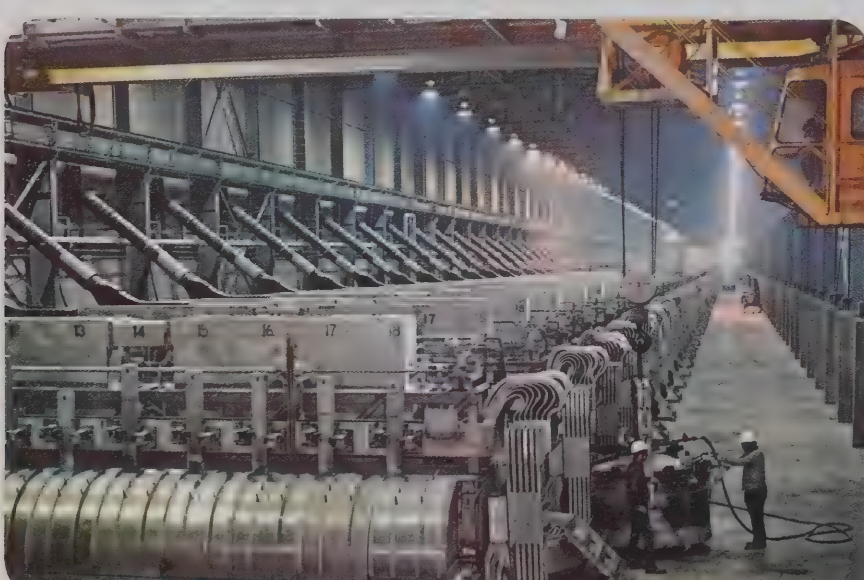
Spurred by easier money and good weather, the U.S. home construction and remodelling industry enjoyed a record year. High construction activity coupled with prompt deliveries from the Cleveland and Jacksonville plants plus the introduction of new products contributed to improvement in sales and profits. Scrap and inventory controls were effective.

NORANDA ALUMINUM

Construction of the 70,000 tpy reduction plant at New Madrid, Missouri was completed in September and production of primary aluminum totalled 37,000 tons during the year. The start-up of the facilities was accomplished in an efficient manner with metal grade exceeding expectations. Production during the last six weeks of the year was at the rated capacity of the plant.

The aluminum industry suffered during the year from excess supply resulting in a severe downward price movement. Industry inventory levels were at an all time high. Major U.S. primary producers curtailed production and ended the year with an operating rate of approximately 82% of capacity.

Sales of bare conductor products from the wire and cable plant showed considerable improvement in volume and have been well received by several large utilities.



Vacuum tapping metal from one of the 174 reduction cells in the aluminum plant at New Madrid, Missouri.

COULTER MANUFACTURING

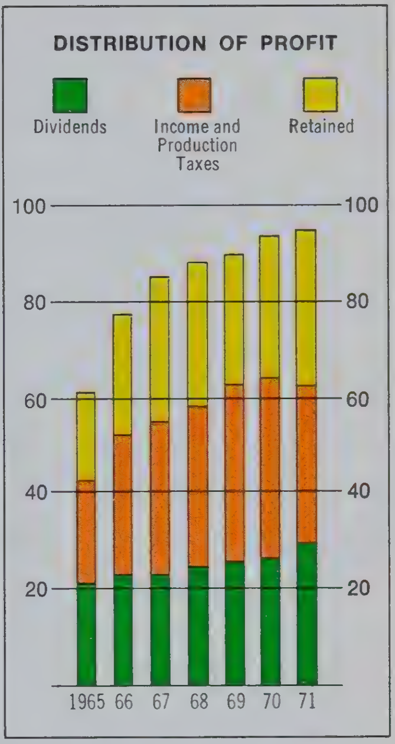
Despite lower costs achieved through improved efficiencies and rationalization of other die casting operations the Company was not profitable in 1971. The continuing reduction in demand for decorative zinc die castings depressed prices to the point that the operation could not be viable in a market largely dependent on the U.S. automotive industry. Operations will be terminated at the conclusion of the 1972 model year.

GRANDVIEW INDUSTRIES

Both plastic pipe plants operated near capacity as sales volume increased with construction activity. Profits improved satisfactorily.

QUEBEC IRON FOUNDRIES

Operations at the four foundries continued to improve but sales and earnings were slightly lower as grinding media shipments were affected by closures and cutbacks at a number of mines.



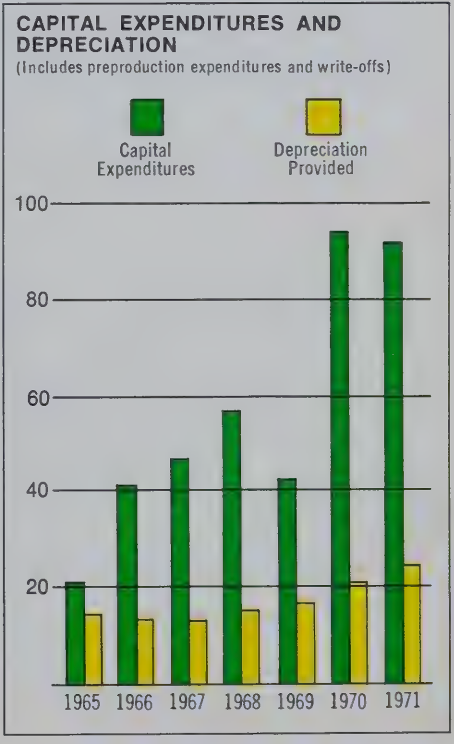
Associated Companies

CANPLAS INDUSTRIES

The plastic moulding plant on Annacis Island in British Columbia operated close to capacity. Sales and profits increased over 1970.

WIRE ROPE INDUSTRIES

Competition from overseas continued to be severe and profits, although satisfactory, were slightly lower than last year in spite of marginally higher sales. Dividends of $200,000 were paid to Noranda in 1971.



FOREST PRODUCTS
Consolidated Companies

Forest products operations were adversely affected by the continuing high value of the Canadian dollar, weak pulp and plywood markets, and steadily mounting costs. Offsetting these factors to some extent was a strong market for lumber.

NORTHWOOD MILLS

Although the two older sawmills operated normally, performance of the two new sawmills at Princeton and Okanagan Falls was disappointing. Difficulties with construction labour and equipment delivery delayed start-up over four months and caused capital cost overruns approaching 20%. Attainment of planned levels of production took longer than expected, and these operations will not be profitable until mid 1972. Nevertheless, it is expected that these mills will be thoroughly competitive with similar units in the industry in terms of both capital and operating cost.

Sales	1971	1970	1969	1968	1967
Lumber– MFBM	476,616	410,946	270,845	251,112	259,369

Northwood's 50%-owned associate, **McBride Lumber and Building Supplies** which operates warehouses in Calgary and Edmonton, produced satisfactory earnings.

During the year, a 25% interest was acquired in **Fundy Forest Industries** of St. George, N.B., through debt guarantees. This company's recently completed corrugating medium mill experienced start-up difficulties resulting in an increase in Northwood's equity through additional guarantees.

NORTHWOOD PULP

Pulp operations suffered from thin markets in 1971, requiring curtailment in production to 80% of capacity. While not providing a reasonable return on investment, the pulp mill operated profitably, efficiently and without interruptions other than for market reasons. While it is acknowledged that Northwood is a leader in environmental control, this continues to be a focus of attention and much work remains to define problems and further advance the state of the art.

The new Prince George small log sawmill was completed within budget and production reached planned capacity within two months. The older mills at Shelley, Eagle Lake and Upper Fraser turned in record performances.

in thousands of (bd feet)

Production	1971	1970	1969	1968	1967
Pulp– Tons	215,503	244,105	226,812	201,824	150,390
Lumber– MFBM	315,259	238,196	227,976	212,343	128,347

In January, 1972, agreement in principle was reached to acquire **Bulkley Valley Forest Industries** which operates a large sawmill backed by substantial timber resources at Houston, B.C., 180 miles west of Prince George. This will add 150,000 MFBM to Northwood Pulp's lumber production. Included with B.V.F.I. are a major lumber marketing organization, Cooper-Widman Ltd., and Tru-Fit a mill-work operation.

Northwood Pulp's associated company, **B.C. Chemicals,** continued profitable production of sodium chlorate, in spite of restricted production of its pulp mill customers. Its capacity is being expanded 50% to 18,000 tons per year to serve new pulp mills in the B.C. interior.

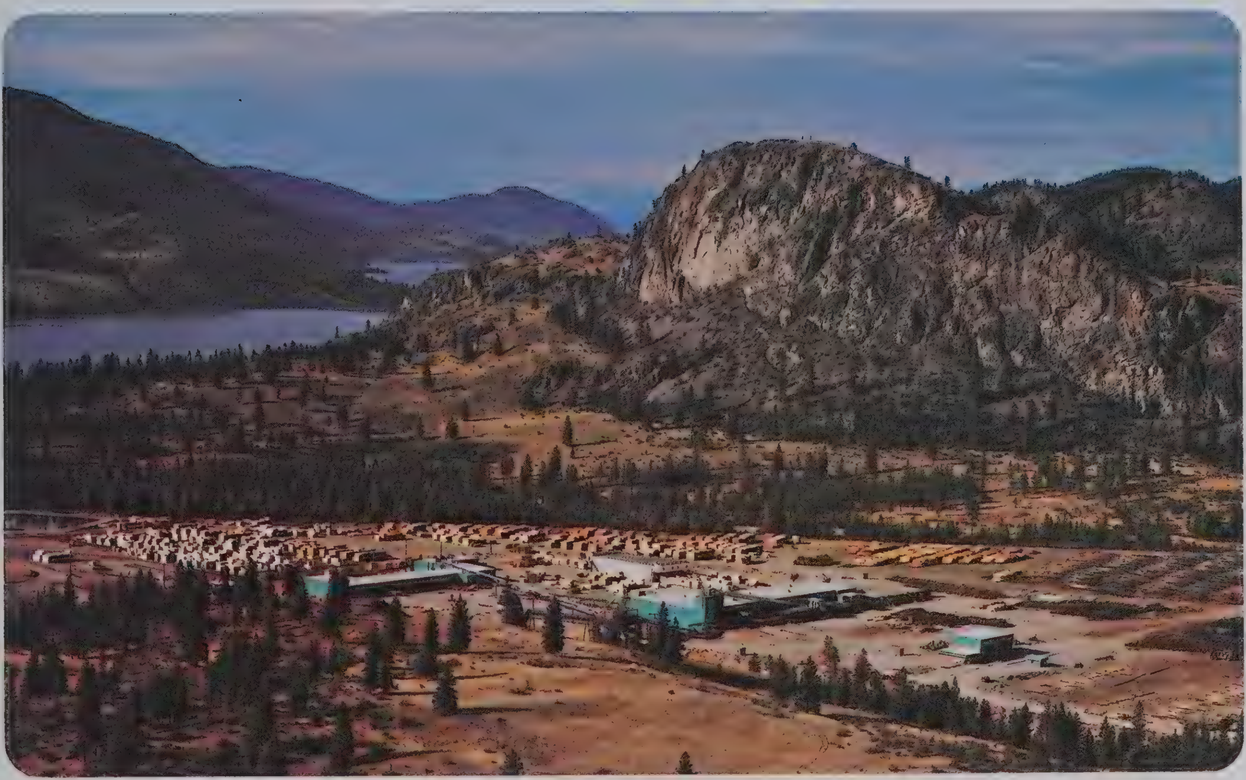
BRITISH COLUMBIA FOREST PRODUCTS

Earnings were $1.30 per share compared with 19¢ in 1970, when operations were disrupted by strikes. The high value of the Canadian dollar reduced 1971 earnings by 91¢ per share. The previous regular quarterly dividend of 25¢ was paid during the first quarter, but dividends were then suspended until the fourth quarter when a 10¢ rate was established.

In addition to poor pulp and plywood markets and the high value of the Canadian dollar, pulp operations were adversely affected by a boiler breakdown. However, newsprint and lumber operations were satisfactory.

Major capital investments in 1971 were toward the $95 million Mackenzie project and acquisition of a major group of coastal B.C. timber operations, the latter being financed by additional borrowings. Start-up of the Mackenzie stud mill is underway, and the new pulp mill is scheduled for completion in the summer of 1972.

Production	1971	1970	1969	1968	1967
Lumber– MFBM	438,200	484,700	486,000	505,000	476,600
Plywood– MSM 1/16″	651,900	659,000	684,000	667,900	663,000
Pulp– Tons	220,800	217,500	272,900	255,900	283,200
Newsprint– Tons	237,750	186,700	222,600	165,500	117,500



Northwood Mills' new sawmill, Okanagan Falls, British Columbia.

CONSOLIDATED STATEMENTS OF EARNINGS AND RETAINED EARNINGS

FOR THE YEAR ENDED DECEMBER 31,

	1971	1970
EARNINGS	(in thousands)	
Revenue:		
From metals, products and custom tolls (note 7)	**$ 461,520**	$ 456,948
Dividends and interest earned (note 1(c))	**21,645**	24,283
Share of profits in associated companies (note 2(a) (i))	**5,222**	7,760
Gain on sale of investments	**541**	861
	488,928	489,852
Expense:		
Cost of metal production and products sold	**317,947**	317,995
Administration, selling and general expenses	**33,704**	29,672
Depreciation (1971 — $22,358,000) and preproduction expenses written off	**24,052**	20,597
Exploration and research written off (note 8)	**4,767**	8,693
Interest (including long-term debt interest of $10,490,000)	**15,984**	17,097
	396,454	394,054
	92,474	95,798
Income and production taxes	**33,677**	37,240
Minority interest in losses of subsidiaries	**(2,653)**	(961)
	31,024	36,279
Earnings before extraordinary items	**61,450**	59,519
Extraordinary items: (note 9)	**(631)**	(1,297)
Earnings after extraordinary items	**$ 60,819**	$ 58,222
Earnings per share:		
Before extraordinary items	**$2.53**	$2.46
After extraordinary items	**$2.50**	$2.41
RETAINED EARNINGS		
Balance, beginning of year	**$ 329,262**	$ 298,305
Earnings after extraordinary items	**60,819**	58,222
	390,081	356,527
Dividends paid	**28,995**	27,153
Excess of cost of investments in consolidated subsidiaries over book value of net assets acquired	**86**	112
	29,081	27,265
Balance, end of year	**$ 361,000**	$ 329,262

(See accompanying notes)

CONSOLIDATED STATEMENT OF SOURCE AND APPLICATION OF FUNDS

FOR THE YEAR ENDED DECEMBER 31,

	1971	1970
	(in thousands)	
Working capital, beginning of year	**$ 131,890**	$ 75,970
Source of funds:		
Operations —		
Earnings before extraordinary items	**61,450**	59,519
Depreciation and preproduction charges	**24,052**	20,597
Deferred taxes	**5,486**	67
Minority interest in losses	**(2,653)**	(961)
	88,335	79,222
Issue of shares	**1,153**	503
Long-term financing	**80,000**	60,000
Fixed asset disposals and adjustments	**3,312**	3,810
Sale of 49% interest in Central Canada Potash Co. Limited	**—**	11,760
Increase in deferred liabilities and holdbacks payable	**2,789**	616
	175,589	155,911
Application of funds:		
Fixed assets and projects under construction	**86,206**	87,692
Less funds released by trustee for aluminum project	**(1,330)**	(54,656)
	84,876	33,036
Acquisition of Brunswick Mining and Smelting Corporation Limited (note 1(b))		
Total consideration	**64,797**	
Deduct — amount of previous investment	**(50,033)**	
— working capital acquired	**(1,370)**	
	13,394	
Dividends	**28,995**	27,153
Investments and advances (net)	**17,770**	17,493
Current maturities of long-term debt	**14,434**	13,470
Deferred preproduction, exploration and other expenditures	**7,152**	7,233
Other (net)	**1,329**	1,606
	167,950	99,991
Net increase	**7,639**	55,920
Working capital, end of year	**$ 139,529**	$ 131,890

(See accompanying notes)

NORANDA MINES LIMITED

(Incorporated under the laws of Ontario) and its consolidated subsidiaries

CONSOLIDATED BALANCE SHEET — DECEMBER 31

	1971	1970
ASSETS	(in thousands)	
Current assets:		
Cash and short-term commercial notes	$ 30,795	$ 54,308
Marketable investments, at cost less amounts written off (quoted market value $20,830,000)	23,057	21,798
Accounts, advances and tolls receivable ($1,137,000 due from unconsolidated subsidiaries)	122,652	115,440
Inventories — mine products at estimated realizable value, other inventories at the lower of cost or market	146,636	118,668
	323,140	310,214
Investments and advances:		
Unconsolidated subsidiaries, at cost (note 1(c))	3,736	54,713
Associated and other companies (note 2(a))	186,084	167,370
	189,820	222,083
Fixed assets:		
Property, buildings and equipment, at cost	663,286	404,311
Accumulated depreciation	253,862	197,799
	409,424	206,512
Projects under construction	55,196	94,723
	464,620	301,235
Other:		
Preproduction ($17,255,000), exploration ($9,527,000) and other expenditures deferred	39,697	34,188
Debenture and revenue bond discount and financing expenses, at cost less amortization	5,202	3,599
	44,899	37,787
	$1,022,479	$ 871,319

(See accompanying notes)

	1971	1970
LIABILITIES	(in thousands)	
Current liabilities:		
Bank advances	**$ 11,266**	$ 15,091
Accounts payable ($835,000 due to unconsolidated subsidiaries)	**127,396**	105,553
Taxes payable	**13,518**	17,661
Debt due within one year (note 3)	**31,431**	40,019
	183,611	178,324
Deferred liabilities and holdbacks payable	**6,042**	3,253
Deferred taxes	**26,721**	37,204
Long-term debt (note 3)	**320,947**	224,091
Minority interest in consolidated subsidiaries	**39,937**	16,117
Shareholders' equity:		
Capital stock (note 4) —		
Authorized: 40,000,000 shares of no par value		
Issued: 24,257,425 shares	**79,178**	78,025
Contributed surplus	**5,043**	5,043
Retained earnings	**361,000**	329,262
	445,221	412,330
On behalf of the Board:		
JOHN R. BRADFIELD, Director		
ALFRED POWIS, Director		
	$1,022,479	$ 871,319

(See accompanying notes)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 1971

1. Basis of statement presentation and foreign exchange translation

(a) The accompanying consolidated financial statements include the accounts of Noranda Mines Limited (the "Company") and all of its subsidiaries except a number of non-operating investment companies, and foreign operating companies, the earnings and assets of which are not significant in relation to the consolidated financial position.

(b) The Company has obtained 64% of the shares of Brunswick Mining and Smelting Corporation Limited (Brunswick) as a result of (1) the exchange of $50,000,000 convertible securities of Brunswick held by the Company for 16,666,667 shares of Brunswick and (2) subscribing for 5,305,516 additional shares of Brunswick under a rights offering to all shareholders which was underwritten by the Company. Concurrently the Company purchased all the shares of East Coast Smelting and Chemical Company Limited (East Coast), a subsidiary of Brunswick, for cash.

For accounting purposes this is being treated as a purchase effective December 31, 1971. The assets and liabilities of Brunswick are included in the accompanying consolidated balance sheet at December 31, 1971, and the results of its operations will be reflected in consolidated income from January 1, 1972.

The total consideration given for the acquisition together with the value of 5,090 common shares of Brunswick previously held is as follows:

	(in thousands)
Company's previous investment in common shares, preferred shares and income debentures of Brunswick	$ 50,033
Cash payment for shares of Brunswick under its rights offering	13,264
Cash payment for the shares of East Coast	1,500
	$ 64,797

The total consideration compares with the consolidated book value of the assets and liabilities of Brunswick and East Coast, as follows:

Book values of assets	$ 139,173
Book values of liabilities (excluding liability to Noranda on income debentures)	67,836
Net book value	71,337
Adjustment to fair value	4,679
	76,016
Deduct minority interest share in net assets at fair value	27,188
Net assets attributable to Noranda interest	48,828
Potential tax reductions acquired	15,969
Total consideration paid by Noranda	$ 64,797

The net assets of Brunswick at fair value are included in the consolidated balance sheet in the following categories:

Current assets	$ 37,916
Current liabilities	36,546
Net working capital	1,370
Fixed assets	103,715
Other long-term assets	721
Deferred taxes	15,969
Debenture discount	1,500
	123,275
Minority interest in consolidated subsidiaries	(27,188)
Long term debt	(31,290)
Total consideration	$ 64,797

(c) Revenue from dividends and interest earned includes $2,222,000 dividends and $3,140,000 interest, from unconsolidated subsidiaries. The Company's share of the aggregate profits less losses of these unconsolidated subsidiaries for their 1971 fiscal periods amounted to $2,145,000. The Company's share of the accumulated undistributed profits less losses of its unconsolidated subsidiaries of $803,000 has not been taken up in the consolidated accounts.

(d) Foreign currency assets and liabilities of the Company and its domestic subsidiaries have been translated into Canadian dollars at current rates of exchange. Working capital of foreign subsidiaries has also been translated at current rates while their fixed assets and long-term debt have been translated at historic rates.

2. Investments

(a) The investments in and advances to "Associated and other companies" include:

(i) 50% interests in Northwood Pulp Limited and Brenda Mines Ltd. and a 29% interest in British Columbia Forest Products Limited (controlled jointly with a partner company). These investments are accounted for on the basis of cost plus Noranda's equity in undistributed earnings since dates of acquisitions.

(ii) Other investments carried at cost less amounts written off.

These investments in and advances to "Associated and other companies" are not temporary investments. They included shares carried at a book value of $114,415,000 which had a quoted market value of $182,505,000 at December 31, 1971. The latter amount does not necessarily represent the value of these holdings, which may be more or less than that indicated by market quotations.

(b) An unconsolidated subsidiary holds 56,000 shares of the Company.

3. Debt

	Dec. 31, 1971	Dec. 31, 1970
	(in thousands)	
(a)		
Long-term bank loans to Noranda and consolidated subsidiaries:		
— U.S. dollars bank loans retired in 1971 ($25,800,000 U.S.)	$ —	$ 26,316
Long-term debt:		
— Noranda Mines Limited		
10% notes payable due February 2, 1973	20,000	20,000
8⅝% notes payable due January 17, 1972	10,000	10,000
7½% sinking fund debentures due Oct. 1, 1988	30,000	30,000
9¼% sinking fund debentures due Oct. 15, 1990	40,000	40,000
— Canada Wire and Cable Co. Ltd.		
5⅝% sinking fund debentures maturing June 1, 1983	3,000	3,250
— Noranda Aluminum Inc.		
4.80% to 5.90% industrial revenue bonds, serial and sinking fund issues, maturing Nov. 1, 1972 to 1978 and 1993 ($85,000,000 U.S.) (Note 3(b))	91,163	91,163
— Norandex Inc. (formerly The Pacific Coast Company)		
5½%-9¼% mortgage notes payable in monthly installments to 1990 (December 31, 1971 — $12,740,000 U.S.; December 31, 1970 — $13,261,000 U.S.)	13,684	14,259
— Brunswick Mining and Smelting Corporation Limited		
5.55% First Mortgage Bonds, Series "A" maturing on April 1, 1972	1,000	
5.85% First Mortgage Sinking Fund Bonds, Series "A" maturing April 1, 1973-1986 inclusive	14,032	
7.25% General Mortgage Bonds, Series "A" maturing on August 15, 1972	1,000	
7.25% General Mortgage Sinking Fund Bonds, Series "A" maturing August 15, 1973-1987 inclusive	16,000	
— sundry indebtedness	1,184	1,169
	$ 241,063	$ 209,841
Other Debt:		
Notes payable (note 3(c))	96,315	27,953
Banker's acceptance (note 3(d))	15,000	—
	352,378	264,110
Debt due within one year	31,431	40,019
Long-term debt	$ 320,947	$ 224,091

Amounts due in repayment of long-term debt in the years 1973 to 1976 are as follows:
1973 — $24,581,000; 1974 — $20,770,000;
1975 — $ 5,985,000; 1976 — $ 7,205,000.

(b) Assets and the related debt of the aluminum plant in New Madrid, Missouri, while technically the property and obligation of the City, are carried on the Company's books by virtue of its long term lease option and unconditional guarantees.

(c) Notes payable represent promissory notes with maturities from January to March, 1972. During 1971 the Company arranged a revolving line of credit with its bankers totalling $80,000,000 extending to June 30, 1976. Notes payable have been classified as long-term debt to the extent of this stand-by line of credit.

(d) During the year the $15,000,000 U.S. bank loan due May 8, 1973, was renegotiated in Canadian funds and banker's acceptances of $15,000,000 were issued. These acceptances are supported by a line of credit extending to May 8, 1974, and are classified as long-term debt.

4. Capital Stock

(a) During the year 43,267 shares in the Company's capital stock were issued under the Company's stock option and share purchase plans for $1,153,000.

(b) At December 31, 1971 options on 109,713 shares were outstanding, exercisable at prices varying from $19.62 to $30.23 for periods up to 1978.

(c) Under the Company's share purchase plan shares are sold to a trustee for resale to employees financed by an interest free loan from the Company. At December 31, 1971 the amount of the loan included in accounts receivable was $1,781,000.

5. Commitments and contingent liabilities

(a) Approved capital projects and financing commitments outstanding total approximately $156,000,000 at December 31, 1971. In addition, the Company has guaranteed repayment of bank loans of associated companies to the extent of approximately $16,000,000.

(b) The estimated future cost of funding past service pension obligations is $4,800,000. This amount will be funded and absorbed against income over a period up to 19 years.

6. Income Taxes

U.S. subsidiaries of the Company have estimated loss carry-forwards for tax purposes of approximately $19,000,000 which are available to offset taxable income in the next few years.

7. Consolidated Divisional Revenues

Revenues from the various divisions of the business are set out on page 26 in the table of "Consolidated Divisional Results".

8. Exploration Expenditures

A gain from the sale of Noranda's interest in a uranium prospect in New Mexico amounting to $5,133,000 has been offset against exploration expenditures written off.

9. Extraordinary Items

Extraordinary items included in the consolidated statement of earnings for the year are as follows:

	1971	1970
	(in thousands)	
Provision for loss on discontinuance of certain mining and manufacturing operations (net of tax)	$ (1,326)	$ (750)
Exchange loss resulting from adoption of a floating exchange rate for the Canadian dollar (net of tax)	—	(547)
Share of exchange gain on conversion of Brenda Mines Ltd. long-term debt from U.S. to Canadian dollars	695	—
	$ (631)	$ (1,297)

10. Remuneration of Directors and Senior Officers

The aggregate direct remuneration paid or payable by the Company and its consolidated subsidiaries to directors and senior officers amounted to $1,032,000.

AUDITORS' REPORT

To the Shareholders of
Noranda Mines Limited:

We have examined the consolidated balance sheet of Noranda Mines Limited and its consolidated subsidiaries as at December 31, 1971, and the consolidated statements of earnings, retained earnings, and source and application of funds for the year then ended. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion these consolidated financial statements present fairly the financial position of the companies as at December 31, 1971 and the results of their operations and the source and application of their funds for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Toronto, Canada,
February 17, 1972.

CLARKSON, GORDON & CO.,
Chartered Accountants.

CONSOLIDATED DIVISIONAL RESULTS

	1971	1970
Revenue from metals, products and custom tolls	(in thousands)	
Copper mining, smelting and refining operations *	**$ 237,189**	$ 259,304
Other mining and metallurgical operations **	**56,220**	41,434
Total mining and metallurgical operations	**293,409**	300,738
Manufacturing operations	**265,540**	250,721
Forest products operations **	**193,363**	168,277
Gross revenue	**752,362**	719,736
Less: sales between divisions	**75,703**	76,504
sales of associated companies **	**215,139**	186,284
Revenue as reported	**$ 461,520**	$ 456,948
Earnings before extraordinary items		
Copper mining, smelting and refining operations*	**$ 46,550**	$ 39,178
Other mining and metallurgical operations **	**3,971**	11,265
Earnings from mining investments	**14,082**	16,243
Gross mining and metallurgical earnings	**64,603**	66,686
Less: exploration written off net of applicable tax reductions	**2,202**	5,518
Net mining and metallurgical earnings	**62,401**	61,168
Manufacturing operations and investments	**5,401**	5,795
Forest products operations **	**3,559**	1,599
Earnings before common costs	**71,361**	68,562
Less: common costs	**9,911**	9,043
Net earnings before extraordinary items	**$ 61,450**	$ 59,519
Breakdown of common costs		
Corporate office costs	**$ 5,242**	$ 6,171
Interest expense net of revenue	**10,669**	10,106
Unallocated research costs	**859**	907
Less applicable tax reductions	**(6,859)**	(8,141)
Total	**$ 9,911**	$ 9,043

* Consists of operations of the Horne and Geco mines, Gaspé Copper Mines and Canadian Copper Refiners.

** Gross revenues and earnings include Noranda's share of the revenues of associated companies accounted for on an equity basis.

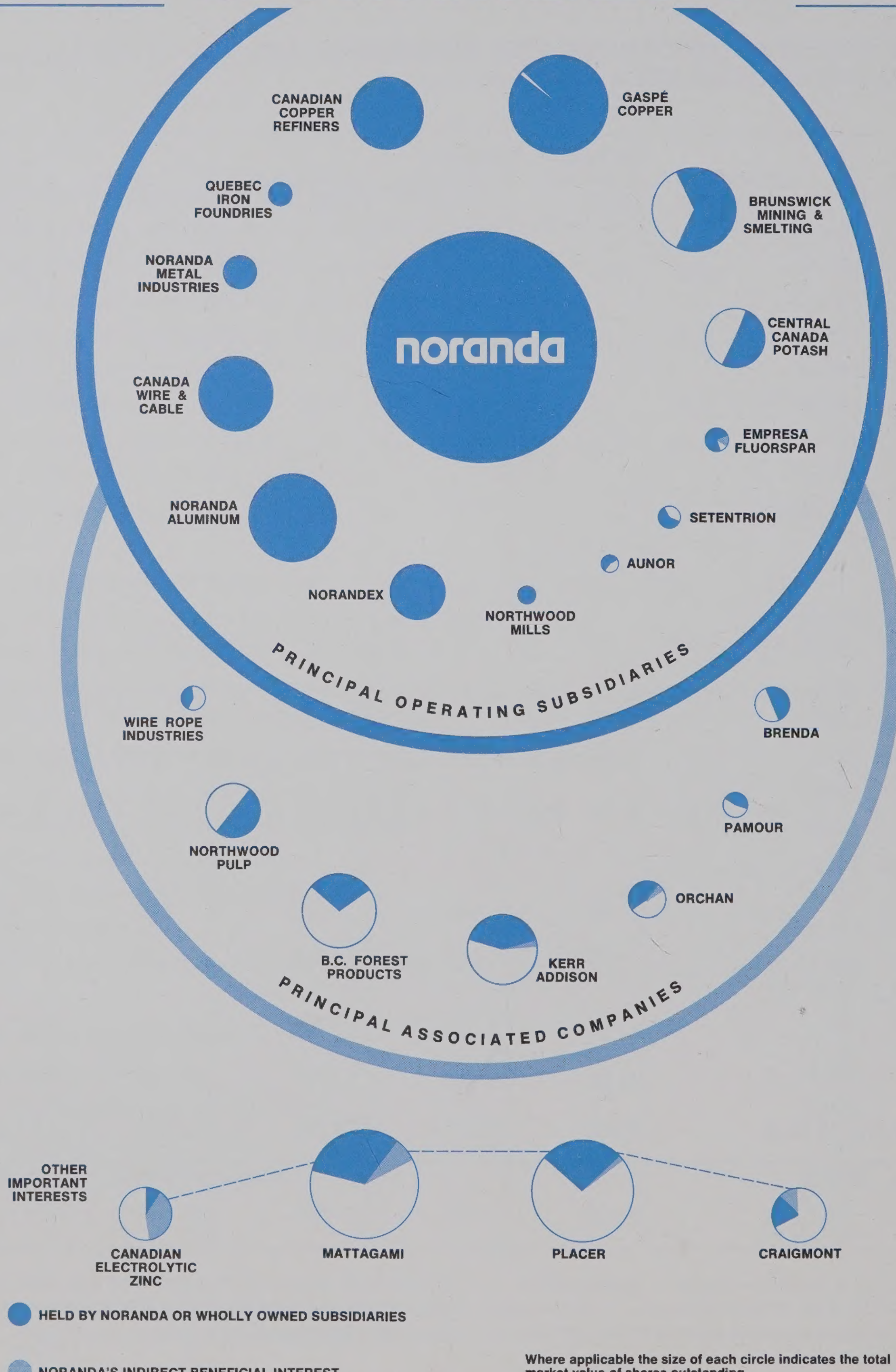
RESULTS OF PRINCIPAL UNCONSOLIDATED SUBSIDIARY AND ASSOCIATED MINING COMPANIES (Dollars in thousands)

	BRUNSWICK MINING AND SMELTING		EMPRESA FLUORSPAR MINES (U.S. Currency)		EMPRESA MINERA de EL SETENTRION (U.S. Currency)		KERR ADDISON MINES		ORCHAN MINES		PAMOUR PORCUPINE MINES	
	1971	1970	1971	1970	1971	1970	1971	1970	1971	1970	1971	1970
Revenues	$ 45,844	$ 39,207	$1,658	$1,533	$3,847	$2,880	$23,755	$25,380	$11,640	$13,934	$3,464	$3,430
Expenses	46,299	38,317	79	64	2,090	1,933	15,322	14,320	6,224	6,578	3,277	2,516
	(455)	890	1,579	1,469	1,757	947	8,433	11,060	5,416	7,356	187	914
Depreciation and Write-offs	11,303	11,385	—	—	427	46	1,624	1,690	2,019	2,267	62	42
Income and Production Taxes	177	104	28	71	417	263	715	2,203	1,385	1,962	—	—
	11,480	11,489	28	71	844	309	2,339	3,893	3,404	4,229	62	42
Earnings (Loss)	$(11,935)	$(10,599)	$1,551	$1,398	$ 913	$ 638	$ 6,094	$ 7,167	$ 2,012	$ 3,127	$ 125	$ 872
Dividends Declared	—	—	$1,819	$1,213	$1,400	$ 700	$ 4,291	$ 5,336	$ 2,423	$ 2,423	$ 250	$ 750
Working Capital	$ 535	$(17,061)	$1,710	$1,985	$3,736	$2,875	$19,962	$17,246	$ 8,658	$ 8,214	$ 706	$ 947
Noranda's Interest:	Note (1)											
Direct	64%		75%		61%		41%		45%		46%	
Beneficial (2)	64%		89%		61%		44%		50%		46%	
Direct Interest In: Net income	—		$1,163		$ 557		$ 2,497		$ 905		$ 58	
Dividends	—		$1,364		$ 854		$ 1,759		$ 1,090		$ 115	
Shareholders' Equity	$ 45,121		$1,793		$2,525		$28,250		$ 7,852		$ 2,855	
1971 Dividends per Noranda Share	—		$ 0.06		$ 0.04		$ 0.07		$ 0.04		—	

Note: 1. See note 1(b) to financial statements. Results will be consolidated with Noranda in 1972.
2. Effective interest through direct and indirect investment in common shares.

Dividends declared in 1971 by the above and other associated companies, exceeded Noranda's beneficial interest in their 1971 earnings by $0.04 per share.

MAJOR INTERESTS



Where applicable the size of each circle indicates the total market value of shares outstanding.

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